

climatic conditions. *Sagda montegoensis*, abundant in the Pleistocene deposits, is now endemic to a small area at the western end of the island. This change in distribution does not seem to be associated with climatic changes.

Thus the late Quaternary is seen to have been host to

some large changes in the geographical distributions of many land snails along the north coast of Jamaica. As in the temperate zone during that time, there was no shifting of faunas *en mass* but instead, different species were affected in different ways.

## ABSTRACTS POSTER SESSION

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**CHRONOLOGY OF THE INVASION OF NORTH AMERICA BY CORBICULA FLUMINEA (BIVALVIA: CORBICULIDAE).** Clement L. Counts, III, College of Marine Studies, University of Delaware, Lewes.

Zoogeographic records of the exotic Asiatic clam *Corbicula fluminea* (Müller, 1774), from the malacological collections of twenty-three museums in the United States, were examined with respect to localities of occurrence and dates of collection. Similar information was gathered from state natural resources departments and published accounts of *C. fluminea* in the United States. All data were combined and then segregated into yearly summaries. Zoogeographic distribution maps were plotted for *C. fluminea* for the time intervals ca. 1925-1945, 1946-1955, 1956-1960, 1961-1965, 1966-1970, 1971-1975, 1976-1982. The zoogeography of *C. fluminea* in the United States through time is related to human transport and theories of animal transport do not account for its present or historic distribution.

**ONTOGENETIC SHELL AND RADULAR CHANGES IN THE DENTALIID SCAPHOPOD, GRAPTACME CALAMUS (DALL, 1899).** Paul S. Mikkelsen, Harbor Branch Foundation, Inc. Ft. Pierce, and Kathryn Muldoon-McLaughlin, Applied Biology, Inc., Jensen Beach, Florida.

Specimens of *Graptacme calamus* (Dall, 1899), collected from offshore of the central east coast of Florida, were examined for details concerning ontogenetic changes in shell length, diameter, sculpture and fractionation. Although the species is known to form an apical plug following breakage of the shell, specimens were determined to fracture at particular, possibly predetermined points, at regular intervals. Shell sculpture changed from smooth to minutely ribbed at a length of about 1.5 mm. The rachidian tooth of juveniles possesses a central prominence which flattens and broadens with age of the specimen, to attain the flat appearance characteristic of the adult rachidian. The number of radular rows increased ontogenetically.